

CLAIMS

The current claim set of the application is presented below. Indications as to the status of the claims ("original", "currently amended", "cancelled", "new", etc.) appear in parentheses after the claim number. Deletions are identified in bold with double brackets and strikethrough (e.g. **[[deletion]]**) and new text is identified in bold with underlining (e.g. new language).

1. (Currently Amended) An implantable bio-ablation composition comprising:

a first polynucleotide encoding (i) a dominant negative N-terminal truncated $\alpha 1$ subunit of an L-type Ca^{2+} channel or (ii) kir/GEM; [encoding sequence that encodes an expresses, in atrioventricular node cells, a molecule that decreases expression of L-type Ca^{2+} channels and thereby suppresses cellular excitability] and a second polynucleotide encoding a $\text{G}_{i\alpha}$ subunit [encoding sequence that encodes and expresses a protein that decreases the conductance of L-type Ca^{2+} channels];

wherein the encoded dominant negative subunit and the encoded $\text{G}_{i\alpha}$ subunit or kir/GEM are capable of being expressed in atrioventricular node cells and wherein expression of both the [[first and second sequences is effective to substantially extinguish]]encoded dominant negative subunit and the encoded $\text{G}_{i\alpha}$ subunit or kir/GEM in the atrioventricular node cells effectively extinguishes conduction through the atrioventricular node.
2. (Cancelled)
3. (Currently Amended) The bio-ablation composition of claim **[[2]] 1**, wherein **[[the G protein is]]** the first polynucleotide encodes kir/GEM.
- 4-5. (Cancelled)

6. (Cancelled)

7-45. (Cancelled)

46. (Currently Amended) The bio-ablation composition of claim 1, wherein the composition comprises a viral vector that includes the first and second ~~[[coding sequences]]~~ polynucleotides.

47. (Previously Presented) The bio-ablation composition of claim 46, wherein the viral vector is a vector selected from the group consisting of a retroviral vector, an adenoivral associated vector, a vaccinia virus vector, and a Semliki Foret virus vector.

48. (Previously Presented) The bio-ablation composition of claim 47, wherein the viral vector is an adenoviral vector.

49. (Currently Amended) The bio-ablation composition of claim 6, wherein the composition comprises a sufficient amount of the ~~[[G_i to overexpress G_{ii}]]~~ second polynucleotide to cause overexpression of the G_{ia} subunit in the atrioventricular node cells.

50. (Currently Amended) The bio-ablation composition of claim 2, wherein the composition comprises a sufficient amount of ~~[[kir/GEM to overexpress]]~~ second polynucleotide to cause overexpression of kir/GEM in the atrioventricular node cells.

51. (Currently Amended) An implantable bio-ablation composition comprising:
a first ~~[[coding sequence that encodes and expresses]]~~ polynucleotide encoding kir/GEM ~~[[in atrioventricular node cells]]~~; and

a second [[encoding sequence that encodes and expresses G_i]] polynucleotide encoding a G_{ia} subunit [[in atrioventricular node cells]], wherein the encoded kir/GEM and the encoded G_{ia} subunit are capable of being expressed in atrioventricular node cells and wherein expression of the [[sequences is effective to substantially extinguish]] encoded kir/GEM and the encoded G_{ia} subunit in the atrioventricular cells effectively extinguishes conduction through the atrioventricular node.

52. (Currently Amended) The bio-ablation composition of claim 51, wherein the composition comprises a viral vector that includes the first and second [[encoding sequences]] polynucleotides.
53. (Previously Presented) The bio-ablation composition of claim 52, wherein the viral vector is a vector selected from the group consisting of a retroviral vector, an adenoviral associated vector, a vaccinia virus vector, and a Semliki Forest virus vector.
54. (Previously Presented) The bio-ablation composition of claim 53, wherein the viral vector is an adenoviral vector.
55. (Currently Amended) The bio-ablation composition of claim 51, wherein the composition comprises a sufficient amount of the [[G_i to overexpress G_i]] second polynucleotide to cause overexpression of the G_{ia} subunit in the atrioventricular node cells.
56. (Currently Amended) The bio-ablation composition of claim 2, wherein the composition comprises a sufficient amount of [[kir/GEM to overexpress]] first polynucleotide to cause overexpression of kir/GEM in the atrioventricular node cells.

57. (New) The bio-ablation composition of claim 1, wherein the first polynucleotide encoding the dominant negative N-terminal truncated $\alpha 1$ subunit of an L-type Ca^{2+} channel encodes an $\alpha 1$ subunit of the ascidian 3-domain type.